

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: SOUTH POND	Lake Area (ha):	50.06
Town: STARK	Maximum depth (m):	28.9
County: Coos	Mean depth (m):	13.3
River Basin: Connecticut	Volume (m ³):	6662000
Latitude: 44°35'34" N	Relative depth:	3.6
Longitude: 71°21'41" W	Shore configuration:	1.24
Elevation (ft): 1115	Areal water load (m/yr):	9.51
Shore length (m): 3100	Flushing rate (yr ⁻¹):	0.70
Watershed area (ha): 725.2	P retention coeff.:	0.56
% watershed ponded: 2.9	Lake type:	natural w/dam

BIOLOGICAL:

		8 March 1994	12 August 1993
DOM. PHYTOPLANKTON (% TOTAL)	#1	SYNURA 95%	DINOBRYON 70%
	#2		CHRYOSOPHAERELLA 10%
	#3		
PHYTOPLANKTON ABUNDANCE (cells/mL)			105
CHLOROPHYLL-A (µg/L)			1.78
DOM. ZOOPLANKTON (% TOTAL)	#1	CALANOID COPEPOD 53%	HOLOPEDIDIUM 25%
	#2		ACTINOPHRYS 25%
	#3		
ROTIFERS/LITER		4	1
MICROCRUSTACEA/LITER		13	9
ZOOPLANKTON ABUNDANCE (#/L)		17	16
VASCULAR PLANT ABUNDANCE			Scattered
SECCHI DISK TRANSPARENCY (m)			9.7
BOTTOM DISSOLVED OXYGEN (mg/L)		4.6	7.7
BACTERIA (E. coli, #/100 ml)	#1		
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 7.0
Hypolimnion volume (m³): 2750500
Anoxic volume (m³): None

CHEMICAL:

Lake: SOUTH POND

Town: STARK

	8 March 1994		12 August 1993		
DEPTH (m)	10.0	20.0	2.5	8.0	19.5
pH (units)	6.3	6.2	6.7	6.5	6.1
A.N.C. (Alkalinity)	3.9	4.3	2.8	3.1	4.2
NITRATE NITROGEN	0.11	0.12	< 0.02		0.08
TOTAL KJELDAHL NITROGEN	0.17	< 0.10	0.21	0.15	0.13
TOTAL PHOSPHORUS	<0.001	0.002	0.006	0.005	0.004
CONDUCTIVITY (μ mhos/cm)	29.0	29.5	26.3	26.9	27.8
APPARENT COLOR (cpu)	8	14	7	10	12
MAGNESIUM			0.35		
CALCIUM			2.5		
SODIUM			1.2		
POTASSIUM			< 0.40		
CHLORIDE	< 2	< 2	< 3		< 3
SULFATE	5	5	5		5
TN : TP			35		53
CALCITE SATURATION INDEX			3.8		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1993

D.O. S.D. PLANT CHL TOTAL CLASS

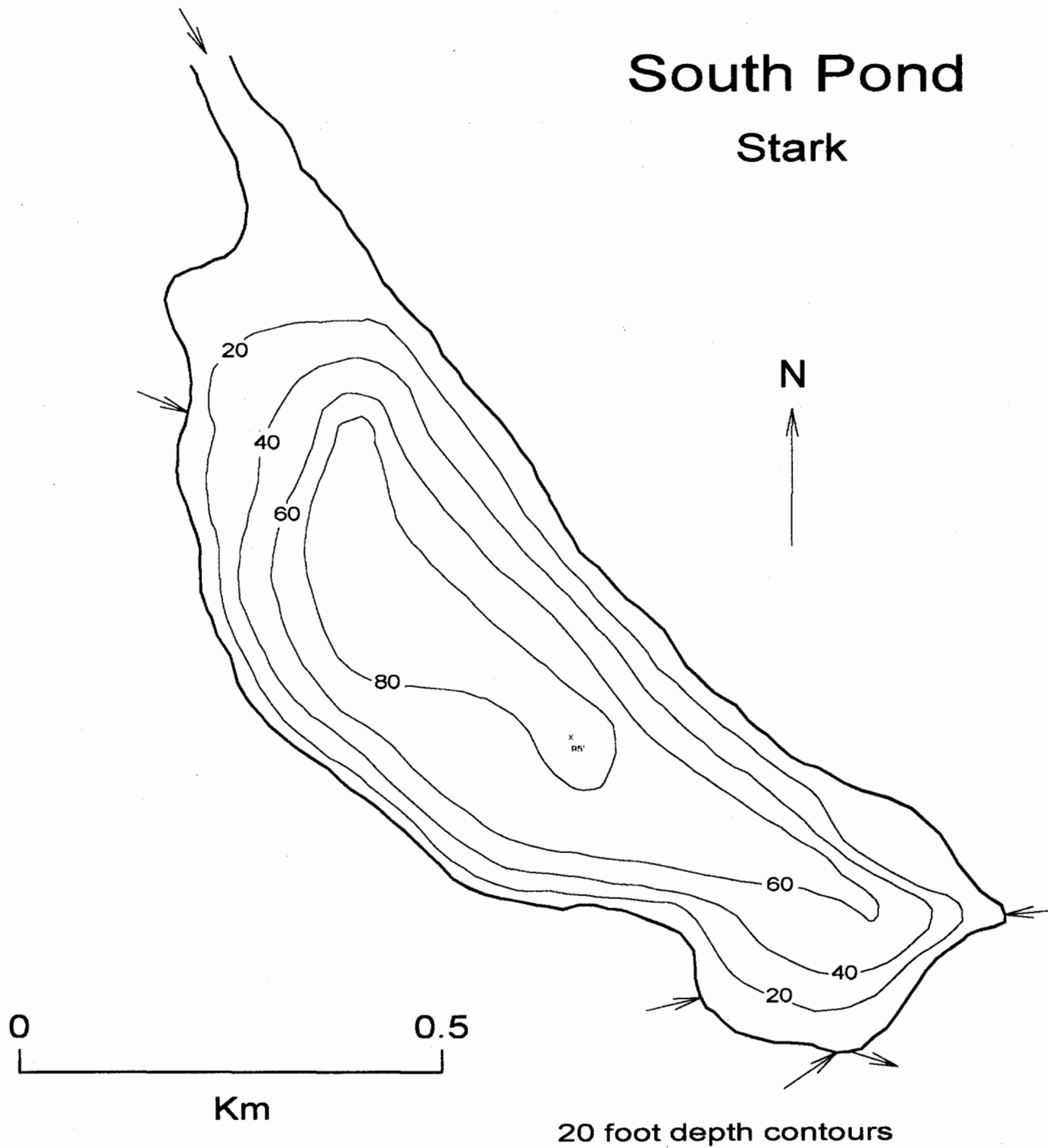
0	0	1	0	1	Oligo.
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COMMENTS:

1. A.K.A. Percy pond; sometimes designated South Ponds and includes the northern section which we call North Pond.
2. This pond was previously surveyed and classified in 1981. There was no change in trophic points and little change in water quality.
3. This is a relatively steep-sided oligotrophic lake with colorless water and excellent water clarity.
4. Both phytoplankton and zooplankton counts were low, typical of nutrient-poor oligotrophic waters.
5. The wholewater phytoplankton were dominated by Merismopedia (35%) and Aphanocapsa or Aphanothece (20%).
6. This pond is located in the White Mountain National Forest. There is a recreational area at the northern end of the pond, but most of the shoreline is undeveloped.

South Pond

Stark



LAKE: SOUTH POND
DATE: 08/12/93

WEATHER: MOSTLY SUNNY; LT. BREEZE; 85F

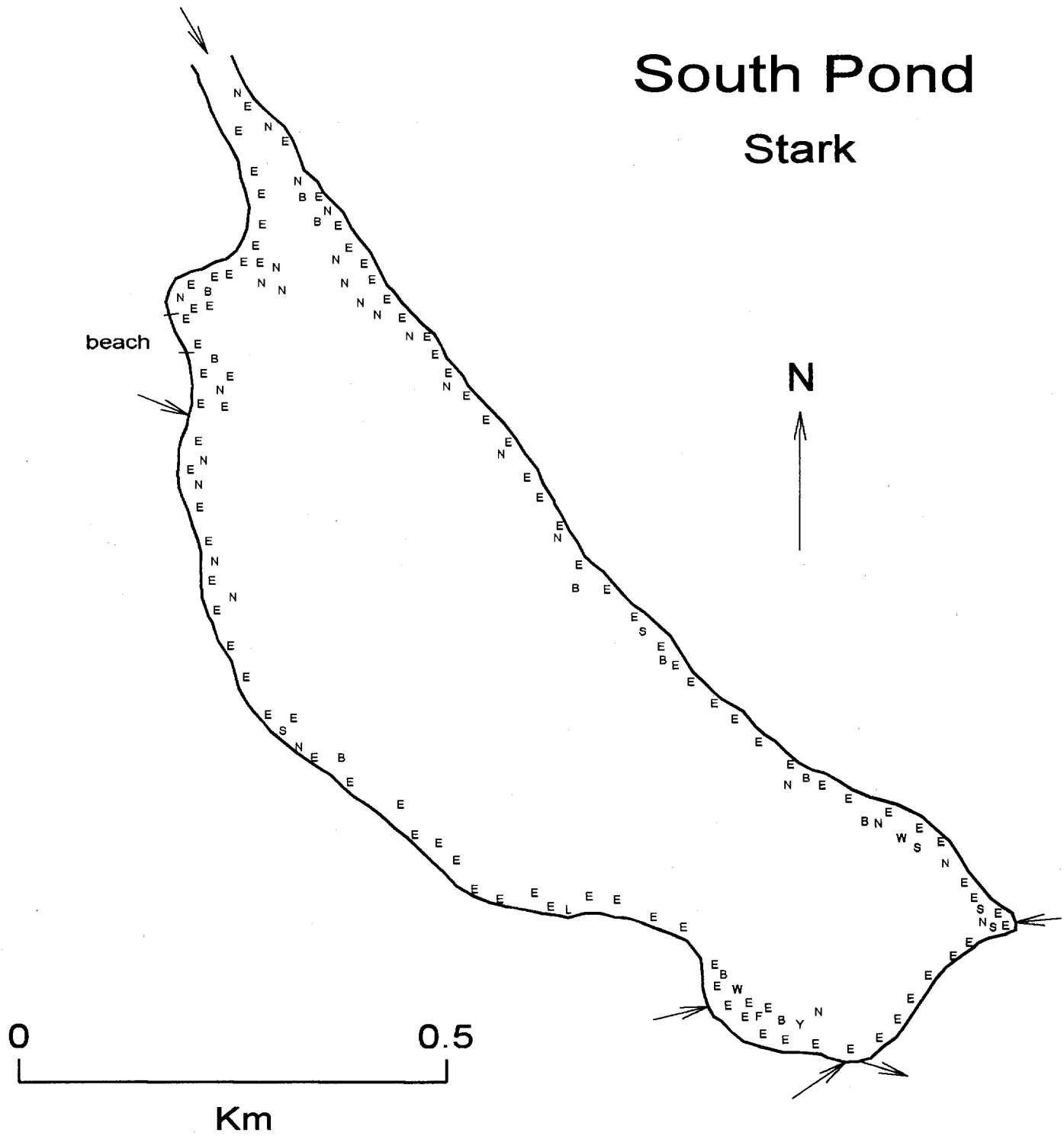
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SECCHI DISK (m):    9.7          COMMENTS:
BOTTOM DEPTH (m):  27.9
TIME:              1000

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111-259

South Pond Stark



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